

GAC 29 Oct

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initiation in developing, demonstrating feasibility (testing) (announcing) (using), using on cities.

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[What if: 1) We had renounced H; and SU got it first?

2) Effect on RCM development programs? On SU deployment?

(Were any of these people for conventional buildup: like Mitzel?)

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"Dear Uncle Jim" 242

"Must explore" — don't commit. But if you announce...

5 chance it is feasible: if yes, and you demonstrate, prob of SU-US bomb race to 1

(in fact, if you demonstrate "privately in US", prob of prod & use <sup>by US</sup> → 1)

if NO: with crash, you have paid cost; & may have stimulated

SU successful effort,

Initiatives: 1) No first use of A/B; 2) no first use of H; 3) No first use against cities;

4) Air alert;

No first development, or test, or use of:



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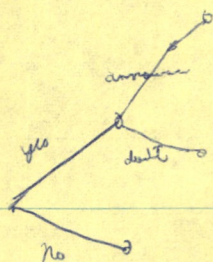
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Bombardment satellites. Doomsday Machines. Weather control. BW-CN.





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247: impossible to tell without a test whether a TV device would work  
(still true in 1952?) <sup>248</sup> (No: time of given device, but knew that H could be made).

247: Should test be held just prior to election? [e.g. after Adlai won?]   
SU would get info.

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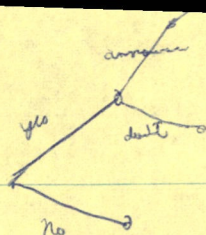
250: When did your strong moral convictions develop?

"When it became clear to me that we would tend to use any weapon we had."

250: implies US would be in better bargaining position in disarm. if it was not developing H.

250-51: fearing increasing reliance on atomic-hydrogen weapons, would then have them in combat [but Vista, in 1951-52, after H was feasible, built up reliance on A-weapons: to prevent reliance on H?]   
[reliance to reduce uncertainty — for fear of own reduction? But (250) if SU was initiative, feasibility didn't mean they were searching: but announcement





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251 [reluctance to reduce uncertainty — for fear of own reduction? But (250) if SU was imitative, feasibility didn't mean they were searching: but announcement had started their search anyway; besides, after June 1951, Op knew that if SU hit this, they wouldn't need encouragement from US test.]

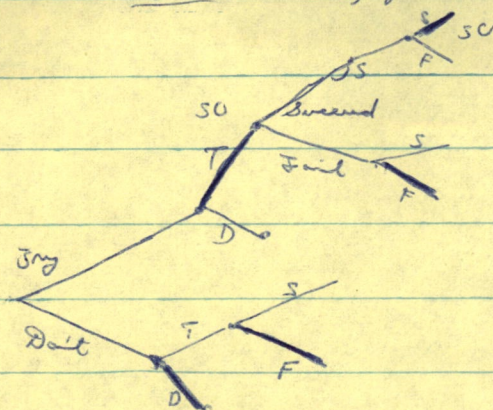


251 "When I saw how to do it, it was clear to me that one had to at least make the thing." Why? Less urgency than in 1949 as to value, weight, cost?

253 said: not many targets for super; we had more than 50; more vulnerable; ship delivery

253 if we could have a world without supers, it would be a better world.

[Prior to Jan 61, foregoing development could mean foregoing the costs of exploration — distorted program, no attempt at disarmament might well fail; + reducing prob that SU would try or succeed (SU compelled to US, given big uncertainty :]



US	SU	
	Don't	Does Dev
USps	0, 0	-300, +50 -50
Yes	-100, -50	-200, -100

US	Neither	SU	SU	(Neither)
	US		Both	2 SU
	Both		Neither	Both
	SU		US	US

0, 0	-3, -1	0	-3
-1, -3	-2, -2	-1	-2

[Convert Prisoner's Dilemma into a sequence of minorant-majorant games.]

By announcing



Neither 0 -1

~~Both~~ SU -2 -3

~~Both~~ US

Both

0 -3

-1 -2

US

Neither 0, 0 -2, 2

Both 1, -2 -1, 0

SU

SU

Both

Neither

US

Why answer if you are going to develop?

(To reassure public, allies — even at cost of stimulating SU effort?)

Was secret development considered? Was interest of US-only possession considered worth much?

Assumption: we couldn't keep program secret; SU could

After mid-1951, US <sup>only</sup> possession did look better than Neither

(true Prisoner's Dilemma) and much better than SU-only.

Before, not clear that big, expensive weapon would be better than Neither  
or that Both would be better than SU only.

0 -2

-1 -2

Both-SU

Neither-US



258: Compton: in 1945: min 5, max 20, prob 10 for SU A-bomb  
(actual: 4)

301 summer of 49, explosion at Oak Ridge  
spring of 1950: Savannah River

302 a visceral reaction - Pardon me? - visceral, turning.

303 proposal to build a bigger one floored them & disgusted them -  
a stomach reaction

- What were developments in A-bombs at ~~the~~ in spring 1950?

May 1951 test.

305 Oppie almost thrilled that we had something that might work  
(p. 51)

315 Did Oppie back against his defense?

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way to do,' ...

[In spring of 50, they "didn't leave a problem" in Bethe's  
series]

323 Early Teller weapon would not work.

329 Bethe: inner troubles; still feel maybe I have done the wrong thing;  
don't think it solves any of our problems.



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[In spring of 50, they "didn't leave a problem" in Acheson  
sense]

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don't think it solves any of our problems.

Alternative: get an agreement with SU not to make.

330 Could afford to give SU head start, even get H first;  
one A bomb would be enough.



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[Suppose that had come in fall of 49!]

Teller discovery: stroke of genius  
(Earlier, reason to hope SU wouldn't pursue, because of uncertainty)  
[Suppose there had been no chance of SU getting it.]

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April 1950 Scientific Amer & Bull of Atomic Scientists

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|| In war, don't overdestroy; minimize collateral damage.  
|| Use smaller weapons, even at cost of more sorties.

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360 Kennan: uncertainty in Jan 60: were A weapons only to deter their use,  
or were we dependent on them?

Marks: Since we not taken position we would only use them  
in retaliation? K: No.

K. favored holding them only as a deterrent.  
if weapons were only for deterrence, then perhaps H not needed.  
[Like now: 100 MT not needed.] K felt we could already  
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Estimates SU would have cultivated them for some reason; count on  
"police weapons."



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For given investment, would you be better off militarily even if H worked?

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395. Fermi: difference of opinion whether to declass policy not to go ahead. Try to outlaw; failing that, with regret, go ahead.

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Bigger bomb would give false sense of security, as did A bomb, compared to balanced establishment.

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432: Pike: no indication military needed such a weapon; cost of tritium high in terms of plutonium; several smaller explosions more efficient than one big; no other useful results of fusion.



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big bomb: or more flexible, H-bombs?

[they were judging military value of a "weapon that didn't exist"]

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469. R: it turned out in the event that both (progress) could have been done.



486 Bradbury: need to explore field.

(Opge: we didn't consider possibility of device other than Super).  
(Uncertainty was such that field needed exploring.)

Desire to crash H led to GAC discussions which tried to counter crash proposal by firm stand against any program.  
["in interests of mature consideration" — but they were taking position as if they had already used mature judgment: despite uncertainty]  
Here, Truman "decision" necessary. [Or was it forced by publicity: Alesop, Pearson]

X 497 Whetson: Opge realized A-bombs would get cheap, useful for tactical.

Small bomb would not need strategic bomber: fighter plane!

advised use of atomic weapon in air defense.

498 ~~was~~ SAC maintenance

513 Rowe: use weapon only in retaliation — against civilization.

520 Dabridge: not clear to me that TN would add in significant ways to destructive power.

[What is size, weight of 500 KT A-bomb?]

[Might 2-stage principle have been discovered in fission program?]

529 favored continuing the R+D program at Los Alamos  
Strengthen moral position: call for agreement.



546 Winne: military usefulness of bomb

costs in terms of A-bombs

GE didn't foresee increase in production

562 Bush opposed New 52 test: would commit new President.

rule out ban on tests

Bomb was of greater value to SU. SC could learn from  
our test.



To: Arnold Kramish

Feel free to mark this up;  
but please return when finished.  
(Or, you may want to have it  
copied).

Andy Marshall, Sam Cohen, for  
Loftis & I have all read & discussed  
this. We would be interested in your  
comments.

Sam Ellsberg